This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A catalyst comprising:

- at least one hydro-dehydrogenating element which is an element of group VIB or of group VIII of the periodic table,
- a non-zeolitic silica-alumina-based substrate containing an amount of more than 10% by weight and less than or equal to 80% by weight of silica (SiO_2),
- a mean pore diameter, measured by mercury porosimetry, between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area between 150 and 500 m^2/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 500 Å, of less than <u>0.01</u> ~~0.1~~ ml/g,
- a pore distribution such that the ratio between volume V2, measured by mercury porosimetry, between D_{mean} - 30 Å and D_{mean} + 30 Å to the total mercury volume is more than 0.6 - volume V3, measured by mercury porosimetry, in the pores with diameters of

more than D_{mean} + 30 Å is less than 0.1 ml/g - volume V6, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 15 Å is less than 0.2 ml/g,

- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of a transition alumina, which is an alpha, rho, chi, eta, gamma, kappa, theta or delta alumina.

2. (Previously Presented) A catalyst according to claim 1, having a proportion of octahedral Al_{VI} determined by the analysis of the NMR MAS spectra of the solid of ^{27}Al of more than 50%.

3. (Previously Presented) A catalyst according to claim 1 comprising nickel and tungsten.

4. (Previously Presented) A catalyst according to claim 1 comprising platinum and palladium.

5. (Previously Presented) A catalyst according to claim 1 further comprising at least one dopant which is phosphorus, boron, and/or silicon and which is deposited on the catalyst.

6. (Previously Presented) A catalyst according to claim 1 further comprising at least one element of group VIIB.

7. (Previously Presented) A catalyst according to claim 1 further comprising at least one element of group VB.

8. (Previously Presented) A catalyst according to claim 1 having a packing density of more than 0.85 g/cm^3.

9. (Previously Presented) A non-zeolitic silica-alumina-based substrate containing more than 10% by weight and less than or equal to 80% by weight of silica (SiO_2), comprising

- a mean pore diameter, measured by mercury porosimetry, between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area between 150 and 500 m^2/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 500 Å, of less than 0.01 ml/g,
- a pore distribution such that the ratio between volume V2, measured by mercury porosimetry, between D_{mean} - 30 Å and D_{mean} + 30 Å to the total mercury volume is more

than 0.6 - volume V3, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 30 Å is less than 0.1 ml/g - volume V6, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 15 Å is less than 0.2 ml/g,

- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of a transition alumina, which is an alpha, rho, chi, eta, gamma, kappa, theta or delta alumina.

10. (Previously Presented) A substrate according to claim 9, having a cationic impurity content of less than 0.1% by weight.

11. (Previously Presented) A substrate according to claim 9, having an anionic impurity content of less than 0.5% by weight.

12. (Previously Presented) A substrate according to claim 9, exhibiting an X ray diffraction diagram containing at least the main lines that are characteristic of at least one of a transition alumina, which is an eta, theta, delta or gamma alumina.

13. (Previously Presented) A substrate according to claim 9, exhibiting an X ray diffraction diagram containing at least the main lines that are characteristic of at least one of a transition alumina, which is an eta- or gamma- alumina.

14. (Previously Presented) A substrate according to claim 9, having a mean pore diameter encompassed between 40 and 120 Å.

15. (Previously Presented) A substrate according to claim 9 comprising at least two silico-aluminum zones having Si/Al ratios that are less than or greater than the overall Si/Al ratio, as determined by X fluorescence.

16. (Previously Presented) A substrate according to claim 9 comprising a single silico-aluminum zone having an Si/Al ratio that is equal to the overall Si/Al ratio, as determined by X fluorescence, and is less than 2.3.

17. (Previously Presented) A substrate according to claim 9, having a packing density, after calcination, of more than 0.65 g/cm^3.

18. (Previously Presented) A substrate according to claim 9 having an acidity that is measured by IR tracking of the thermodesorption of pyridine is such that the B/L ratio is between 0.05 and 1.

19. (Withdrawn) A process for hydrocracking and/or hydroconversion of a hydrocarbon-containing feedstock comprising providing a catalyst according to claim 1 or the catalyst that contains the non-zeolitic silica-alumina-based substrate that contains an amount that is more than 10% by weight and less than or equal to 80% by weight of silica (SiO_2), comprising

- a mean pore diameter, measured by mercury porosimetry, between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, between 0.1 ml/g and 0.6 ml/g,

- a BET specific surface area between 150 and 500 m^2/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 500 Å, of less than 0.01 ml/g,
- a pore distribution such that the ratio between volume V2, measured by mercury porosimetry, between D_{mean} - 30 Å and D_{mean} + 30 Å to the total mercury volume is more than 0.6 - volume V3, measured by mercury porosimetry in the pores with diameters of more than D_{mean} + 30 Å is less than 0 ml/g - volume V6, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 15 Å is less than 0.2 ml/g,
- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of a transition alumina, which is an alpha, rho, chi, eta, gamma, kappa, theta or delta alumina.

20. (Withdrawn) A process for hydrocracking and/or hydroconversion according to claim 19 that is carried out according to a single-stage process.

21. (Withdrawn) A process for hydrocracking and/or hydroconversion according to claim 20 that comprises:

- a first hydrorefining reaction zone in which the feedstock is brought into contact with at least one hydrorefining catalyst that exhibits in a standard activity test a methylcyclohexane conversion level that is less than 10% by mass,
- a second hydrocracking reaction zone in which at least a portion of the effluent that is obtained from the hydrorefining stage is brought into contact with at least one non-zeolitic hydrocracking catalyst that exhibits in a standard activity test a methylcyclohexane conversion level that is more than 10% by mass,
- and in which the proportion of the catalytic volume of the hydrorefining catalyst represents 20 to 45% of the total catalytic volume.

22. (Withdrawn) A process for hydrocracking and/or hydroconversion according to claim 19 that comprises at least a first hydrorefining reaction zone and at least a second reaction zone that comprises a hydrocracking of at least a portion of the effluent of the first zone and that comprises an incomplete separation of ammonia from the effluent that exits from the first zone.

23. (Withdrawn) A process for hydrocracking and/or hydroconversion according to claim 19 in a two-stage process.

24. (Withdrawn) A process according to claim 19 that operates, in the presence of hydrogen, at a temperature of more than 200°C, under a pressure of more than 1 MPa, wherein the volumetric flow rate is between 0.1 and 20 h^{-1}, and the amount of hydrogen that is introduced is such that the volumetric ratio of liter of hydrogen/liter of hydrocarbon is between 80 and 5000 l/l.

25. (Withdrawn) A process for hydrocracking and/or hydroconversion according to claim 19 that operates at a pressure between 20 and 60 bar and that results in conversions of less than 40%.

26. (Withdrawn) A process according to claim 19 that operates in a fixed bed.

27. (Withdrawn) A process according to claim 19 that operates in a boiling bed.

28. (Withdrawn) A process according to claim 23, in which the catalyst comprises at least one of the noble elements of group VIII.

29. (Withdrawn) A process according to claim 28, in which the catalyst comprises platinum and/or palladium.

30. (Withdrawn) A process for hydrotreatment of a hydrocarbon-containing feedstock comprising providing a catalyst according to claim 1 or a catalyst that contains the non-zeolitic silica-alumina- based substrate that contains an amount that is more than 10% by weight and less than or equal to 80% by weight of silica (SiO_2), comprising

- a mean pore diameter, measured by mercury porosimetry, between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area between 150 and 500 m^2/g,

- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 500 Å, of less than 0.01 ml/g,
- a pore distribution such that the ratio between volume V2, measured by mercury porosimetry, between D_{mean} - 30 Å and D_{mean} + 30 Å to the total mercury volume is more than 0.6 - volume V3, measured by mercury porosimetry in the pores with diameters of more than D_{mean} + 30 Å is less than 0 ml/g - volume V6, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 15 Å is less than 0.2 ml/g,
- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of a transition alumina, which is an alpha, rho, chi, eta, gamma, kappa, theta or delta alumina.

31. (Withdrawn) A process according to claim 30 that is placed upstream from a hydrocracking process.

32. (Withdrawn) A process according to claim 31, where the hydrocracking catalyst is based on zeolite.

33. (Withdrawn) A process according to claim 31, where the hydrocracking catalyst is based on silica-alumina.

34. (Withdrawn) A process according to claim 19, in which the hydrocracking catalyst is based on nickel and tungsten.

35. (Withdrawn) A process according to claim 19, in which the hydrocarbon-containing feedstock is LCO (light cycle oil), an atmospheric distillate, distillate, wherein the feedstock is obtained from a unit for extracting aromatic compounds from lubricating oil bases or obtained from a solvent dewaxing of lubricating oil base wherein the distillate is obtained by a processes for desulfurization or hydroconversion in a fixed bed or in a boiling bed of a RAT (atmospheric residue) and/or RSV (vacuum residue) and/or a desasphalted oil, the deasphalted oil by itself or in a mixture.

36. (Currently Amended) ~~A catalyst according to claim 1, wherein the~~ A catalyst comprising:

- at least one hydro-dehydrogenating element which is an element of group VIB or of group VIII of the periodic table,
- a non-zeolitic silica-alumina-based substrate containing an amount of more than 10% by weight and less than or equal to 80% by weight of silica (SiO_2),
- a mean pore diameter, measured by mercury porosimetry, between 20 and 140 Å,
- a total pore volume, measured by mercury porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a total pore volume, measured by nitrogen porosimetry, between 0.1 ml/g and 0.6 ml/g,
- a BET specific surface area between 150 and 500 m^2/g,

- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 140 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 160 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 200 Å, of less than 0.1 ml/g,
- a pore volume, measured by mercury porosimetry, in the pores with diameters of more than 500 Å is 0.01 ml/g.
- a pore distribution such that the ratio between volume V2, measured by mercury porosimetry, between D_{mean} - 30 Å and D_{mean} + 30 Å to the total mercury volume is more than 0.6 - volume V3, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 30 Å is less than 0.1 ml/g - volume V6, measured by mercury porosimetry, in the pores with diameters of more than D_{mean} + 15 Å is less than 0.2 ml/g,
- an X ray diffraction diagram that contains at least the main lines that are characteristic of at least one of a transition alumina, which is an alpha, rho, chi, eta, gamma, kappa, theta or delta alumina.

37. (Previously Presented) A catalyst according to claim 1, wherein the pore volume, measured by mercury porosimetry, in the pores with diameters of more than 500 Å is 0.001 ml/g.